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## EXPERTS AND THEIR TESTIMONY.

In answer to a very courteous request received by the writer from His Honor Judge Endlich, the following attempted definitions of "expert" and "expert testimony" were submitted to him in February, 1897, with requests for his criticism :

Expert testimony may be defined as that which either rests upon the application through reasoning of principles susceptible of explanation and approved by persons of average intelligence ; or is based upon the personal experience of one who is more than ordinarily qualified to discriminate between similar impressions. Testimony which does not fall under one of these two heads should not be admitted as expert testimony.

It is also to be noted that the weight of expert testimony is proportional to the clearness with which the mental processes leading to a given conclusion can be followed by the hearer. Where this cannot be done, the whole force of the testimony depends upon the belief in the witness's competency and honesty.

An expert is one skilled in a subject by observation or investigation.

To which the judge replied, in part :

. . . The idea that, it seems to me, ought to be conveyed by a definition of expert testimony would be that it "rests either upon the application through reasoning of principles which are generally recognized as controlling in any given science, art or trade, by those who are practically or theoretically, or both practically and theoretically, conversant with the same ; and which, while presumptively beyond the common knowledge of men, are yet susceptible of explanation to and approved by persons of average intelligence—or is based upon personal experience, etc." . . . In 174 Pa. 298, Judge Williams says : ". . . An expert witness is one who, because of the possession of knowledge not within ordinary reach, is specially qualified to speak upon the subject to which his attention is called." Possibly, a combination of the essential thoughts expressed in your definition and that of Judge Williams might result in something more nearly perfect than we have yet had. . . . I believe, with you, in retaining so much of the present system as puts the selection of expert witnesses (at least in the first instance) into the hands of the parties. I don't think, however, that they ought to be at liberty to call as many as they please—but only a reasonable number. . . . Your division of experts and their testimony into subjective and objective, and your notice of the blending of the two, are very good, indeed. . . .

In consequence of this first failure a second effort was made as subjoined, and this was submitted to several gentlemen of the Pennsylvania Bar, of whose comments brief condensations here follow.

The words in brackets were stricken out by Judge Endlich.

I. *Expert.* An expert is one who by greater power of discernment than ordinary men [either as a gift of nature, or] by reason of a greater number of previous experiences, is better able than they to elucidate a given question by observation or investigation.

II. *Expert Testimony.* Expert testimony is that given by such a person, and is based upon his individual impressions as to the facts. *But in so far as it is possible for him to expose to persons of average intelligence the successive mental processes by means of which he attains his conclusions it is [shall be] his duty to do this: and such demonstration however easily intelligible when thus explained, if requiring more than ordinary knowledge or skill to make it does not lose [shall not be held to have lost] its character as expert testimony.*

27 February, 1897.

. . . Scientifically, I think very highly of your definition. I doubt, however, whether it would be accepted by the courts as a definition of what, in law, is regarded as an "expert."

In legal thought I do not think the idea of "greater power of discernment" enters. The man may start with the most ordinary powers of discernment; but if he can testify to a sufficient number of previous experiences he will be admitted. The "greater power of discernment" constitutes the great "expert;" but is not necessary in law to an "expert."

So much for your definition. If you ask me to substitute a better, I must decline. I am always ready to act as critic in pointing out the defects of others; but I have become too much of an "expert" in the ways of the world to expose my own constructions to the criticisms of others. I am,

Very sincerely yours,

JOHN G. JOHNSON.

Mr. Samuel Dickson substitutes the following:

March 1, 1897.

*Expert.* One having such special knowledge as to make his opinion a reasonable ground of belief.

*Expert Testimony.* The opinion of an expert upon facts proven or stated hypothetically. In so far as it is possible for him to (re)state the mental processes or experimental methods by which he has reached his conclusion, it shall be his duty to do so.

The second attempt at definitions having been forwarded to Judge Endlich, together with the comments of Mr. Johnson and Mr. Dickson, His Honor replied as follows:

March 4, 1897.

. . . I still prefer your definition of "expert" as it stands on the slip inclosed by you. The "greater power of discernment" Mr. Johnson objects to is, I think, all right in association with the succeeding phrase, "by reason of a greater number of experiences." His criticism is virtually the same as that which I made upon the words "as a gift of nature." As he says, it is the previous experience that qualifies a man as an expert. Even tea-tasters, artists, and the like, are accepted as experts, not because they have naturally acute perceptions or genius in their lines, but because they are tea-tasters, artists, etc.—because that is their business or profession, or because they have made studies or experiments in those matters—all of which implies experience. But, after all, the ultimate reason why the latter is admitted as a basis of qualification to give opinion evidence is this, that such experience may be presumed to have imparted a greater power of discernment in a particular branch of knowledge, etc., than ordinary men can possess. It is the ignoring of this latter element, which is a condition precedent to the admissibility of expert testimony, (viz., the *subject* must be one beyond the presumptive capacity of the ordinary man,) that would seem to constitute a well founded objection to Mr. Dickson's definition. If after the word "knowledge" were inserted something like this: "on a subject beyond the presumptive grasp of ordinary man," his definition of "expert testimony" is one which suggests no need of improvement to my mind. . . .

Mr. George Wharton Pepper, under date of April 12, 1897, says:

. . . If, from the statements of facts made by witnesses, or from an inspection of inanimate objects produced, one, upon the basis of special experience, is able to establish a premise \* material to the conclusion of the suit, which premise \* persons without the special equipment could not establish—then in virtue of his ability to establish that premise\* he is an expert, and his testimony is expert testimony. I would accordingly attack the problem with which you are dealing by endeavoring to define "expert testimony" rather than the term "expert"—since the law on this head has tended to develop a theory of *testimony* rather than a theory of

\* Conclusion (?). P. F.

*witnesses.* I would then define testimony and expert testimony somewhat as follows :

I. Testimony consists of the stating of facts or the production of objects, under certain guarantees of truth and genuineness, from the hearing of which statements or from the examination of which objects an inference may be drawn as to the existence or non-existence of a fact in issue or of a fact relevant to the issue. The person who states the facts or identifies the object is called the witness.

II. When the process of inference requires no other equipment than the education and experience necessary for the conduct of the ordinary affairs of life, the inference must be drawn by the jury.

III. When from facts stated or objects produced, a relevant inference may be drawn, but where the drawing of it involves such knowledge in a given sphere as results only from special study or unusual experience, the inference in such case must be drawn, not by the jury, but by one who has pursued the study or who has had the experience. The explanation of the process of inferring and the statement of the conclusion is called expert testimony, and the witness is called an expert witness.

IV. Expert testimony accordingly results in furnishing the jury with a new fact to serve as a new premise from which the jury may draw its conclusions, as in other cases. It follows that expert testimony may involve either (1) the drawing of inferences from facts which would be admissible in evidence even in the absence of expert testimony, because from such facts the jury might draw a partial inference, or (2) the drawing of an inference from facts which would have no significance for the jury at all in the absence of expert testimony, and are therefore admissible only for the purpose of laying ground for the testimony of an expert. . . .

Mr. John Douglass Brown, Jr., under date of November 18, 1897, says :

. . . When the judge is satisfied that the witness offered is entitled to express an opinion which the jury may properly consider in reaching their verdict, it is permitted to counsel to examine him and to opposing counsel to cross-examine him as to his knowledge, experience and methods. It may seem as though this were practically the same thing as requiring the expert to prove his conclusions worthy of belief by justifying the methods which he has employed, which I take it is the underlying thought of your definition ; but there is certainly a distinction. You would seek to make the expert demonstrate his position and consider his opinion of very little importance unless he could demonstrate its soundness to the jury ; while the law, on the other hand, says that the judge may say to the jury, "the opinion of this witness on the point involved is a fact of sufficient importance for you to consider in reaching your verdict, and the counsel who offered him may examine him as

to his knowledge, experience and methods of work, and the counsel who are on the other side may cross-examine him on the same points, after which you are to determine what you think his opinion to be worth.”

This is what I understand the law to hold in regard to experts. It is difficult to frame a definition ; but I suggest the following, which I believe is accurate :

“An expert is one who, when a matter in dispute is to be determined by a science or an art, the mastery of which requires special study, or by knowledge derived from particular application to a specialized occupation, is believed by the court to possess such experience as to make his opinion on the matter in dispute, a fact properly to be considered by the jury in reaching a conclusion thereon.”

“Expert testimony may be supported or assailed by examining or cross-examining the expert as to the extent of his experience and the methods employed by him in arriving at his opinion, and the weight of his testimony is to be determined by the jury. . . .”

### *Expert Testimony.*

It may be assumed that the object of all public institutions is the good of the community; and that there is a gradual approach by means of progress and change towards greater perfection ; and that the sole aim of those who are considering this question is to secure a better utilization of a part of the world’s power for the attainment of a larger measure of good for the world’s benefit. Any power may be misdirected and rendered harmful. It is the purpose of those who are giving their time to this subject, to curtail as much as possible the opportunities for the abuse of the power of expert testimony, and to enlarge the field in which it can act only as an aid to the elucidation of truth and to the accomplishment of justice.

There are two principal theoretical points of view from which it may be regarded: that of the jurist, and that of the expert himself; the former, of course, of greatly preponderating importance, and both subservient to the practical necessities of the public, in whose interest the study is undertaken.

In reality, the expert has only the right to demand that the practice shall enable him to give to the jury or the court, as it may be, the facts as he finds them. He is not competent to embody in the form of a law the restrictions under which

expert testimony may be presented in court, although perfectly competent to formulate the rules by which any expert work should be judged by a body of scientific men.

The reason of this is obvious. The common law which has been found on the whole to yield such good results in the hands of the Anglo-Saxon race, has grown like the palace of St. Mark by successive additions and patches. Much of its structure is composed of conventional usages and interpretations of which the lay mind is ignorant, and yet these parts have a strength, like that of a "built-up-beam," as great as similar parts of a brand new code expressed in modern English, and which is the ideal of the practical man.

There would be great danger in allowing one, ignorant of the history of the law and the significance of its formulas to insert a new part among its venerable timbers, lest some of the strongest spikes that bind the latter together should be displaced, and the whole structure crumble.

Exclusively to the juris-consults, therefore, belongs the task of formulating the law governing the presentation of expert testimony, and if they have graciously invited experts to participate in their deliberations it is in order that the rights of the latter may be fairly safe-guarded in the new provisions.

The writer disclaims any pretension of being able to suggest the proper form for a new patch on the old common law. If the question were on the adoption of a new code to replace the old, the limitations of a layman, whether expert or not, would be very much less. This conviction has been forced upon him while trying to find a definition of expert, and expert testimony, which would satisfy both jurist and scientific man.

The statement of the various steps in this effort will well illustrate the difficulty alluded to. The object was to find such a definition for "expert" witness as to exclude charlatans, and those who qualified themselves for the expert class recognized by the present law, in order to be able to sell testimony to the first applicant for their services.

If such a problem were presented to the consideration of a body of scientific men the first thought would be to require

from the witness a minute and circumstantial statement of the various facts or postulates on which the investigation was based; how and where they were obtained; and the successive steps of reasoning by which the conclusions were reached. The most unblushing perjurer could not stand this test; for either his testimony would have real value, or the errors in his facts, reasoning, or method would become apparent.

But, after carefully considering the language in which these limitations of an expert was expressed, the writer learned with dismay that under the existing law this definition would exclude from the category of experts any one to whom it applied, for the reason that the jury is supposed to be able to take all necessary ratiocinative steps as well as those skilled in special subjects.

The difficulty to the lay mind in comprehending this fiction of the law is that obviously, even to the most superficial observer, the greatest geniuses attain their highest fame, not so much by giving to the world what was beyond the reach of others, as by following the obscure path of consequences from a region well known, to an eminence hitherto unscaled.

In other words, a large majority of the most important additions to human knowledge consists in a demonstration of the consequences which must follow from the existence of several isolated, but well known facts. The putting together of these facts in a manner to show their mutual relationship and the support they give to a hitherto unsuspected conclusion, is, as exclusively confined to original and master minds, and is as essential to the welfare of mankind, as any of the results of original research.

Can there be no expert in mathematics, or in mechanical astronomy? Would Kepler, Newton and LaPlace have failed to secure this title? Yet they only put well-known facts into new relations to each other, thereby erecting new structures of old material; from which, however, immensely enlarged views of Nature were obtained. Would it be improper to call Blackstone and Coke and Kent experts in the profession they adorned? Yet, presumably, any jury of twelve men could have looked up the authorities and written the commentaries

which, after all, are only the perfection of human reason—and therefore the every-day tools of the juryman.

It would seem from this that, in the present state of the law, not only is preference given to ex-cathedra utterances, without further support than the "experience" of the witness, but actually the term expert is confined to one who has practiced the profession, or engaged in the pursuit in which the facts testified to are observed; or has been accepted previously by other courts as an "expert" on kindred subjects, no matter what his capacity may be. This method of selecting experts is good only so long as the honorable character of the witness is beyond question. On the other hand, it throws open the door to any dishonest person who may wish to earn a living by "experting;" and it is this ancient relic of a period antedating the precise methods of modern science which is responsible for the abuses of expert testimony complained of by many learned jurists to-day. As long as this antiquated view of experts endures, it is difficult to see how the canker can be eradicated.

Two courses are open; the one which, naturally, suggests itself to the non-legal mind, unhampered by too much experience, is to abandon the old fashioned notion of an expert, as an impediment in the way, and a useless anachronism. To such a mind it seems that there would be no greater shock to the fabric of the law by this procedure than occurred when modern civilization demanded the removal of the unnatural restrictions on the liberty of women. Inasmuch as all existing institutions, and especially the common law, are compromises, in process of continual change, say these innovators, why perpetuate this obsolete conception after it has become a fetter and a nuisance? Iconoclasts of this type do not consider the consequences of such a change, nor the difficulties in bringing it about without confusion and injury to private interests in a congeries of communities, each of which is more or less affected by the administration of the law in all the others.

It is not within the writer's province to specify the objections to this method of solving the difficulty, which is that which

he would naturally be inclined to prefer, but he can see that there may be many and grave objections to it.

The other course is that proposed by Judge Endlich in his able and instructive paper on Expert Testimony, read before the Pennsylvania Bar Association at its Water Gap Meeting, July, 1898. In the sketch of proposed amendments accompanying this paper, Judge Endlich endeavors to introduce restrictions into the several provinces of expert testimony, rather than to change the fundamental idea of "expert," for the purpose of minimizing venality and incompetency.

It is as if he left untouched the venerable gate, consecrated by centuries of English practice, through which expert witnesses have hitherto entered the courts of our ancestors, but fenced around the preserves over which they have been hitherto accustomed to roam at will; providing at each a wicket which only those specially qualified can pass.

The advantage of this method is that it leaves unimperiled the sacred palladium of the rights and liberties of generations of Anglo-Saxons (which, like the sacred British inch, is believed by many worthy people to have divine origin, and to have been specially created for a favored people).

The disadvantage is that it requires special and complex construction to accomplish what a simple, if radical, device would better effect. Moreover, as in all cases where many smaller parts are employed to accomplish the object which might be attained by one larger, it is occasionally liable to fail in its design by excluding what should be admitted; and, owing to its lesser power of resistance, admitting what it was intended to exclude.

Restrictions are useful only for a class which is not actuated by high principle. To this class it is easy to gain admittance to the witness stand by misstatement or distortion of facts. The most desirable class is, of course, the most conscientious, and one which would frankly avow its ineligibility under some minor or unimportant part of the strictly construed rule of qualification.

In the first section of the changes suggested by Judge Endlich, which is concerned with the qualifications of those

who shall be eligible to testify as experts, it is possible to imagine a case of hardship where a desirable expert witness would be excluded because not properly belonging to either of the first four categories enumerated; but any scheme less drastic than primary exclusion from the entire field must now and then do some injustice.

Nevertheless, that Judge Endlich's plan would vastly improve the class of experts before the courts of law of this Commonwealth, and promote the only object of employing them, *i. e.*, the attainment of the truth, seems to one of the humblest of those who have been recognized by the courts as belonging to this much abused class, very certain.

*Persifor Frazer.*

Philadelphia, September 22, 1898.